

DEFECTIVE EYES.

It will be impossible for me to consider as fully as I should like the cause of defective eyes and the optics of defective vision. This matter has been thoroughly considered in a pamphlet I have for distribution. The pamphlet was prepared for teachers by former Secretary Lewis of the State Board of Health. It is a splendid publication and well worthy of your study. It will be sent to you upon request.

Defective eyes that the school teacher should be able to recognize are three: the farsighted or hemitropic eye; the nearsighted or myopic eye, and the astigmatic eye.

The farsighted eye is usually hereditary. The eyeball is too short from before backward. The distant vision is all right; near vision is only possible under strain, and often altogether impossible. Johnnie holds his book as far from him as his arms will permit. After using the eyes for some time, or after using them for a short time in a poor light, he complains often of soreness about the eye-sockets, headache, and dullness. He is tired. On the other hand, he can shoot as well as anybody, because hunting requires distant vision. And because he gets along very well out of school and can shoot well, his parents believe Johnnie is faking about not being able to see. He is punished and scolded by parents and teachers and laughed at by his playmates for being a blockhead, until another character gets a twist in it.

The nearsighted eye is acquired, and 90 per cent of them come on between the ages of six and sixteen years—the school period. This eyeball is too long. There is no distant vision. The child's visual world is narrow, cramped. The child must hold the book very close to see at all. Now, when we read we do not focus our vision on more than a square inch or so of a book or paper—one word is about all our vision is focused upon at one time. That space may be regarded as a large point. Now, the closer we bring the object viewed to the eyes the more the eyes have to be turned in to bring the ball of the eye in line with the visual axis. Therefore, the nearsighted eye must overwork those muscles that pull the eyes in toward the nose. These muscles become extremely tired on long-continued use, and that tired feeling, headache, and nervousness, which occurred in the farsighted eye, make their appearance. Another symptom, frequently present, is double vision, that is, a single word or object appears as *two* words or objects. This symptom is due to the final giving way of one of the muscles that serve to pull the eyes far in toward the nose, which is necessary for vision in the myopic or nearsighted eye. Now, this eye gets worse and worse the longer it is used, and sometimes terminates in complete blindness.